

THE BIOLOGIST



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THE BIOLOGIST

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PHI SIGMA SOCIETY

An Organization Devoted to the Promotion of Interest in Research
in the Biological Sciences, Founded Ohio State
University, March 17, 1915.

COUNCIL

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THE BIOLOGIST

OFFICIAL QUARTERLY PUBLICATION
OF THE
PHI SIGMA SOCIETY

Volume XIV

Denver, Colo., Sept.-Dec., 1932

Number 1

DIRECTORY

OF ALL ACTIVE AND INACTIVE CHAPTERS

Their Location and Secretary's Address

OHIO STATE

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NEW HAMPSHIRE

(Phi) Mr. Cecil V. Creath, Theta Upsilon Omega House, Durham, New Hampshire.

MONTANA STATE

(Chi) Miss Sarah Jane Barringer, Pi Beta Phi House, Bozeman, Montana.

WASHINGTON

(Psi) Mr. John R. Roberts, Botany Department, University of Washington, Seattle, Washington.

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Pullman, Washington.

BUCKNELL

(Alpha Iota) Miss Anna Rohland, Box 223, Women's College,
Lewisburg, Pennsylvania.

HUNTER

(Alpha Kappa) Miss Marie Kravietz, 168 E. 66 St., New York, N. Y.

UTAH

(Alpha Lambda) Mr. Frank P. Giles, 1057 Hollywood Ave.,
Salt Lake City, Utah.



AN APPRECIATION

Doctor Richard Goldschmidt, Director of the Kaiser Wilhelm Institute, Berlin-Dahlem, Germany, was initiated as an honorary member of Phi Sigma at Norman, Oklahoma, by Omega Chapter on October 26. Dr. Goldschmidt's international position as an authoritative geneticist, particularly on sex-determination, gives his words of acceptance of the honor a unique significance to all members of Phi Sigma.

ONE of the experiences which comes to men who are growing older, and who do not like to grow old, is the election to various honors. Generally these honors are awarded by even older men—men with one foot in the grave. Naturally such honors are prized, for they show that one's professional labors have been regarded as successful. They are the more appreciated, if, as is often the case, recognition of the truth and importance of one's discoveries has been a slow and painful process. But in spite of that, such honors carry with them the melancholy suggestion of passing years and approaching age.

THERE is no such suggestion in the honor you have just conferred upon me. It comes from younger workers who are looking ahead to the future with hope and confidence. You have made me your comrade in the adventure of pushing forward your scientific investigations. Such an honor is unique in my experience, and I deeply appreciate it.

A WORD TO THE CHAPTERS

By Dr. Paul B. Sears, Chancellor of Phi Sigma.

THERE is an increase of morale among professional societies on American campuses this year. Work is more fashionable than it has been for some time. Serious public lectures are being well attended, and lecturers of ability are to be had more easily than usual.

I trust no chapter officers will neglect the opportunities which these conditions bring. Intelligent and energetic activities will bring large returns. There is particular need to diversify the contacts of your chapter. Competition in the teaching and technical professions has been increasingly severe for a decade, but opportunities still exist in plenty for capable and well trained workers. It is likely that the technological applications of biology will increase rather than diminish in importance in the future. A catholic viewpoint on the part of young biologists is more necessary now than ever before. Phi Sigma, by bringing together students, faculty and outside lecturers having a wide range of interests, can make a unique contribution to the biology of the future.

TO CHAPTER VICE-PRESIDENTS

By Dr. Paul A. Warren, Tufts College, Medford, Mass.

THIS contribution contains advice from a chronic vice-president to his long suffering brethren.

You may be a vice-president because you did not have enough votes on the first ballot. That would make you at least runner-up in the chapter. Or perhaps you were elected on a separate ballot. Cal and I use this alibi. At any rate you *are* a vice president. What are you going to do about it?

It may be your plan to just wait until your disgustingly prosperous president sells Steel short and has to leave college before you do anything but learn your precious lines. Possibly you are waiting for him to break an ankle so that you can pound the gavel for a single night. Or, of course it may be that you are downright glad that you *are* a vice-president because you have neither work nor responsibility. This last is true of your National Vice-President.

But look in your book. Phi Sigma is the only fraternity in existence which really puts its chapter vice-presidents to work. And that is not all. Phi Sigma gives you the nastiest but most important job which ever comes to a fraternity officer, that of poring over the records and personally studying the personalities of a flock of inane underclassmen to pick a chapter for next year.

You are chairman of a committee. That makes you, ex-officio, the entire committee as all chairmen know. The activity of this year's chapter is in your president's hands. The future of your chapter is in your hands. Admit one disturbing element and your chapter is lost for a period of years as all fraternities know. Leave out one really good man and you will never live it down.

Time was when fraternities talked a lot about ideals. Now they look for men. In these days of wholesale de-bunking most of the high sounding phrases have been eliminated from the frat vocabulary. In picking members look not for one who looks as though he would uphold the lofty ideals of our great fraternity and wear our key with grace but rather for one who acts as though he really amounts to something. Find a few freaks, like yourself who look as though they might some day become biologists. If they are good-looking, accomplished at the piano, make good grades, play football or even dance well, be not disturbed. They may still be good research workers.

Study the rare disease, *pyelobiologistitis*. A short but incomplete list of the symptoms follows.

1. Sleeplessness in class.
2. Tendency to turn in drawings and then enjoy the microscope.
3. No interest whatever in the names of plants and animals.
4. Inherited dislike for the Education Department.
5. Great interest in the microtome room, none in washing glass-ware.
6. Good appetite. I might even say, superior appetite.
7. High grades in chemistry, low in government.
8. Keen eyesight, sharp hearing, keen sense of smell (except for students of anatomy).
9. Natural inquisitiveness—about everything.
10. Patient reads constantly, frequently covering serious article with College Humor to avoid suspicion.

The patient need not show all of these symptoms. No student is perfect. In fact, you may discover more important symptoms of this dread disease. The *Biologist* will be glad to know of them.

I offer no list of disqualifications for membership. There are none except those which any intelligent student will easily recognize.

N. B. Females read she for he, and women for men, in the above.

Most sympathetically yours,

THE NATIONAL VICE CHANCELLOR.

TO ALL PHI SIGMAS:

By Dr. A. I. Ortenburger, National Secretary.

AS announced in the chapter letter sent out October 12, 1932, Phi Sigma plans to hold a scientific session as an associated society with the American Association for the Advancement of Science. This scientific session is for the reading of papers giving the results of research carried on by members of Phi Sigma.

Phi Sigma has always stood for active leadership in stimulating biological research among students. For this reason, our society is decidedly something more than the usual so-called honor society. If Phi Sigma, like so many other societies, merely gave its membership as an empty honor for work done or a certain minimum standard of grades achieved, your National Officers and older members would not be particularly interested in continuing their work for you. I feel sure that your group thinks of Phi Sigma in the proper attitude.

It is the hope of the National Council that this year's scientific session of Phi Sigma will be even more successful than the last one, although it was eminently satisfactory from all standpoints. No activity of Phi Sigma has created a more favorable impression than the scientific programs which its members have presented.

Phi Sigma's future as a national organization depends in a large part upon the opinion that the Council of the American Association for the Advancement of Science develops. Their reaction is, without the shadow of a doubt, dependent very largely upon one thing to the exclusion of everything else—namely, the activity of our society as shown by the papers read at our scientific sessions held as a society associated with the A. A. A. S. If, therefore, Phi Sigma is to advance in a national way, as we know it should, and receive the credit and standing due it, the success of our scientific sessions must be considered by the individual chapters as one of the *most important* things to be accomplished each year.

Please urge all your members who can to prepare papers for reading, even though they themselves cannot be present. Another member may read their papers for them—preferably a member of their own chapter. The importance of making this meeting a success cannot very well be over-exaggerated. The presentation of papers is not limited to active student membership—any member may participate.

It should not be necessary to point out that these papers are not expected to be lengthy, profound, obviously erudite contributions such as would be expected from men many years the senior of the average Phi Sigma member. Phi Sigma members are beginners in research, and as this is understood, please do not be hesitant in sending or reading your papers, even though they may seem quite unimportant to you, and even though your problem is not completed.

Phi Sigma members should take this meeting seriously, and each chapter should feel that it is its duty as well as its privilege to have a few papers, at least, to represent it.

The meetings of the American Association for the Advancement of Science are held this year at Atlantic City, and as usual, during Christmas vacation, December 27-31, 1932.

Phi Sigma will hold its meetings Wednesday, December 28, and Thursday, Dec. 29, at the place designated in the program of the A. A. A. S.

TO CHAPTER TREASURERS:

By Erwine Hall Stewart, National Treasurer.

MY chief advice to chapter treasurers is to remember that the General Academic Assessment is now due, and becomes overdue on December first. Chapter remittances not received by that date render the local organization delinquent.

I would be greatly obliged to the Treasurers if all those whose Chapters did not square up their accounts last Spring would do so soon.

You will be gratified to know that material reductions in the price of our society jewelry have recently been secured from the manufacturers of our keys. This is especially pleasing since the new tariff has affected these items. In spite of it, however, our Phi Sigma keys are now obtainable in many cases at lower prices than before.

OF GENERAL INTEREST

Guinea Pigs

In the lee of the laboratory wall,
Where they get their daily rations,
I heard the guinea pigs, great and small,
Comparing inoculations.

Said Guinea Pig 1, as pert and vain
As a girl in hat from Paris:
"Your pardon, friends, if I seem insane,
But I'm full of *B. vulgaris*!"

Said Guinea Pig 2: "You may shortly see
A paper with me for a basis,
As the living and breathing epitome
Of virulent *B. anthracis*!"

Said Guinea Pig 3: "A mammoth debt
That science of medicine owes us!
Why, look at me and the way I get
With doses of *B. typhosus*!"

Then guinea pigs both of lean effect
And guinea pigs short and stocky
Agreed, "We are all of the high elect,
For we're primed with *Streptococci*!"

—Arthur Guiterman, in the "Kalends"
of the Williams and Wilkins Company.

TWENTY BEST WAYS TO KILL ANY ORGANIZATION

The following bit of unofficial fraternity tradition was clipped years ago from a medical fraternity journal, at present unknown to the Editor. It is too good to remain unnoticed in a scrap book.

1. Don't come to meetings.
2. If you do attend, find fault with the work of the officers and other members.

3. Never accept an office. It is easier to criticize than to do things.
4. Get sore if you are not appointed on a committee. If you are, don't attend committee meetings.
5. If afforded an opportunity to express your opinion on an important matter, have nothing to say. After the meeting tell everyone what ought to have been done.
6. Do nothing if you can avoid it. Tell 'em you're too busy. When other men roll up their sleeves and unselfishly put things over, howl that the chapter is run by a clique.
7. Hold back on your dues as long as possible, and finally announce you don't consider yourself a member any longer.
8. If you hear someone finding fault with the organization, put in your kick also—join the anvil chorus.
9. When a banquet is given, tell everybody money is being wasted on blowouts that make a big noise and accomplish nothing.
10. When no banquets are given say the club is dead and needs a can tied to it.
11. If asked to sit at the speaker's table, modestly refuse.
12. If you are not asked, resign from the club.
13. If you receive monthly statements of your account, tell them to stop dunning you.
14. If you don't receive monthly statements, refuse to pay because you were not notified.
15. Don't tell the chapter how it can help you, but if it doesn't help, resign. Expect individual, not community benefit.
16. If you receive service or benefit without joining—don't think of joining.
17. Unless you can actually trace two dollars worth of returns for every dollar spent, resign.
18. If the chapter doesn't correct abuses in your neighbor's business, howl that nothing is done.
19. If it calls attention to abuses in your own business, resign.
20. Keep your eyes open for something wrong. When you find it, resign and get all your friends to resign.

MORE INITIATES

THE closing of the 1931-1932 scholastic year saw the total of initiations materially increased. Twenty-two chapters reported additions to their respective memberships, totalling two hundred and ninety-two, or a little better than an average class of thirteen. This is encouraging, when one considers the fact that the cumulative effect of the financial stringency was making its worst and deepest impression last Spring. The chapters and their initiates follow: Beta 16, Delta 6, Zeta 25, Theta 9, Iota 10, Mu 28, Xi 4, Pi 4, Rho 24, Tau 3, Upsilon 7, Chi 3, Psi 20, Omega 9, Alpha Alpha 19, Alpha Beta 17, Alpha Epsilon 10, Alpha Eta 12, Alpha Zeta 9, Alpha Theta 25, Alpha Kappa 9, Alpha Lambda 23.

WITHIN REACH OF YOUR CHAPTER FINANCES

Initiation Insignia

Does your Chapter carry out the Ritual of Initiation properly? In other words, has your Chapter the model Phi Sigma Key and the large Phi Sigma Coat of Arms required by the Ritual. They are both in easy reach of every Chapter's finances.

The Model Key, furnished in two colored gold, costs only \$1.75.

The Coat of Arms, hand-colored on 12x16 heavy paper, only \$1.25.

Address all orders, and make all checks payable to the Secretary, Dr. A. I. Ortenburger, Department of Zoology, University of Oklahoma, Norman, Oklahoma.

EDITORIALS

HONORARY MEMBERS

OMEGA Chapter is to be congratulated on its rare discernment of the eternal fitness of things in that it chose as its most recent addition to our select list of honorary members, Dr. Richard Goldschmidt. In honoring the illustrious German geneticist Omega has done honor to itself, and to all Phi Sigma. It has set an example that more than one chapter may find opportunity to follow. Not infrequently a chapter for reasons best known to itself may be unable to select candidates for honorary membership from its own campus. Such chapters will undoubtedly welcome Omega's precedent and elect to honorary membership noted biologists from outside whose presence at the local institution affords an altogether agreeable opportunity to show an understanding appreciation for their prowess in the field of research.

This is entirely in keeping with the policies of Phi Sigma. Not every campus is blessed with research biologists whose activity has merited for them the distinction of being starred in "American Men of Science". This limited source of honorary members so sufficiently restricts the granting of this distinction of honorary membership that it is improbable that we shall ever have a very large percentage of such members.

Once honorary membership has been conferred, however, the Chapter's relationship should not be supposed to discontinue. Honorary members are in a very real sense the patrons and the exemplars of the chapters. It is true that Faculty Members are supposed to act in an advisory capacity in chapter affairs. This does not restrict the Chapter from seeking counsel with its honorary members. They will naturally continue to be interested in the organization which has welcomed them into its fellowship in exact proportion to the interest that organization shows in keeping up the contacts thus initiated. We have known social Chapters whose policy in regard to their honorary members might well, if inelegantly, be summed up in the popular saying: "Love 'em, and leave 'em." Undoubtedly some honorary members of various campus groups would absolutely refuse such election if they foresaw the rapidity with which the fraternity or sorority was to forget them. Conferring such honorary memberships is Indian-giving. It not only takes all the good out of the action, but leaves the recipient of the dubiously "hon-

orary" membership with the unpleasant feeling that his name and position is merely another scalp on the war-belt of the chapter.

It is, therefore, a wise provision of Phi Sigma, which insists that each Honorary Member receive the "*Biologist*" regularly. Chapter Secretaries are entrusted with this duty. When the copies of our bulletin are ordered the card specifies the number of honorary members who are to be presented with each issue. Such a charge cannot fail to bring the secretaries into closer and more friendly contact with the honorary members of the chapter. Such contacts will prove helpful in unsuspected ways.

Our society jewel is the pearl. It is surely not too poetical, or far-fetched, to say that our select and distinguished roster of seventy-five honorary members constitutes a treasure of scientific merit impossible of adequate appraisal.

EASTWARD HO!

THE forthcoming session of the A. A. A. S. in Atlantic City during the Holidays offers a splendid opportunity for the Seaboard and Tidewater Chapters to make a distinctive contribution to the future of Phi Sigma. This is our unique distinction and our privilege. Among all the scientific organizations which will foregather in the famous resort, Phi Sigma is the one which will conduct a series of sessions to which the undergraduate student of biological science will have free access without the formality of member-sponsorship and introduction now customary in other scientific bodies. It is to be hoped that Dr. Sears and Dr. Warren, our Chancellor and Vice-Chancellor will have occasion to preside over a series of papers which will continue to win the enthusiastic commendation and friendly interest in the aims and purposes of Phi Sigma from the national leaders of science who guide the destinies of the A. A. S.

A couple of classroom "boners" have come to my attention:

A student's definition: "Mitosis is an explosion of the nucleus."

Instructor: "How does water enter the root hairs?"

Student: "Why—er—it sort of seeps in."

WARNING!

SOME unprincipled individual is reported to be "working" certain sections of the country, offering club memberships in Phi Sigma and Beta Beta Beta for five dollars. The only requirement is membership in Tri-Beta, the officers of which organization are cooperating with our National Secretary in running down such an imposition. Members of Phi Sigma who hear of such attempts, or contact such imposters, will favor both organizations if they immediately report the matter to the nearest National Officer, or the National Secretary.

PHI SIGMA INSIGNIA

Membership keys may be obtained from the National Treasurer through Chapter Treasurers, or directly. In the latter case give your name, Chapter and year of initiation, *plainly*.

REVISED PRICES OF KEYS

These prices given include the Federal Tax when required.

Standard Size (official) 10K gold

Swivel ring top.....	\$5.45
Stationary ring top.....	5.00
Swivel ring top; mounted as pin; safety clasp.....	7.12
Stationary ring top; mounted as pin; safety clasp.....	6.60

Small Size 10K gold

Swivel ring top.....	5.00
Stationary ring top.....	4.50
Stationary ring top; mounted as pin; safety clasp.....	5.45

Green or White Gold

Green gold keys, additional.....	2.00
White gold keys, additional.....	5.00

Address correspondence to:

MR. ERWINE HALL STEWART,
Treasurer of Phi Sigma,
Mesa, Colorado.

OF SPECIAL INTEREST

DID YOU KNOW THAT . . .

Beta

Leigh Hoadley, '19, is a member of the editorial board of the *Biological Bulletin*.

Newell A. Norton, '25, is the associate editor of the *Gamma Alpha Record*.

Epsilon

Dr. Frank H. H. Roberts, '23, a staff-member of the Bureau of American Ethnology, has reported the discovery of the fire swept ruins of a house containing timbers cut in the years 797 A. D. The house is reported to have been found at an Indian site near Allentown, Arizona.

Zeta

Harold G. Hewitt, '25, is the business manager of the *Gamma Alpha Record*.

Frederick L. Hisaw, '24, professor of biology, University of Wisconsin lectured on "Hormones influencing the Endometrium", during the course of a symposium of lectures on glands of internal secretion being sponsored by the Department of Zoology at the University of Minnesota.

Professor Leon J. Cole, '27, of the University of Wisconsin, with Professor Edward Ellery conducted the ceremonies of the installation of the 59th Chapter of Sigma Xi at Western Reserve University.

E. C. Tennis, '21, discovered a fungus in Louisiana soil that appears to be a friend to the sugar planter, for it poisons another fungus, the pithium species that attacks the root of cane.

Iota

Dr. H. M. Miller, '23, who two years ago began investigating the possibility of artificially immunizing rats against infection by the tapeworm, has now carried his experiments further. Eventually there is hope of developing the same protection for human beings.

Dr. Margaret L. Gardiner, '30, an associate of Dr. H. M. Miller, is assisting in attempting to find a suitable serum to immunize human beings against infection by a tapeworm.

George L. Moore, '26, Missouri Botanical Garden is a member of the editorial board of the *Biological Bulletin*.

Mu

J. P. Turner, '25, is doing research work at Minnesota in the "Fibullar system in the ciliate euplotes patella" and "Osmiophilic bodies related to golgi bodies in euphlotes".

Psi

Professor John Weinzirl, '30, of the department of bacteriology of the University of Washington was recently tendered a banquet by one hundred and twenty-three graduates, students, colleagues, and friends of his. The occasion was the celebration of twenty-five years of service to the University of Washington.

Alpha Zeta

Donald Walton Davis, Professor of Biology, college of William and Mary is a member of the board of advisors of the Mountain Lake Biological Station.

HONORS, GRANTS, AND APPOINTMENTS

Delta

Dr. P. W. Whiting, of the department of Zoology at the University of Pittsburgh, has been promoted to a full professorship.

Zeta

Dr. Joseph G. Baier, '30, of the department of Biology of the University of Wisconsin, Extension center in Milwaukee, has been appointed instructor in Zoology.

Myron P. Boehus has been awarded a reappointment by the Board of National Fellowships in the Biological Sciences.

Stephen T. Dexter, '30, has been awarded a reappointment by the Board of National Fellowships in the Biological Sciences.

Samuel L. Leonard, '28, has been awarded reappointment by the Board of National Fellowships in the Biological Sciences.

Luther Shaw, '30, has been awarded an appointment by the Board of National Fellowships in the Biological Sciences.

Iota

Dr. Joseph Erlanger, '27, Prof. of Physiology in the Washington University, St. Louis, School of Medicine, had the degree of doctor of laws conferred on him at the 69th commencement of the University of California.

Dr. P. Oliver, '30, has been appointed assistant professor of zoology at the University of Minnesota.

Kappa

Chester R. Gawey, '25, has been awarded a reappointment by the Board of National Fellowships in the Biological Sciences.

Mu

Walter E. Sammerts, '26, has been awarded reappointment by the Board of National Fellowships in the Biological Sciences.

F. P. Zscheile, Jr., '26, has been awarded a reappointment by the Board of National Fellowships in the Biological Sciences.

Pi

Dr. Warren B. Matthews, assistant resident in surgery at the University of Chicago Clinics has been awarded the just Joseph A. Caps prize for medical research.

Chi

W. H. Tharp, '27, has been awarded an appointment by the Board of National Fellowships in the Biological Sciences.

Tracy L. Storer, '22, has been promoted to a professorship in the Zoology department at the University of California.

Alpha Theta

William K. Smith, '30, has been awarded an appointment by the Board of National Fellowships in the Biological Sciences.

Alpha Eta

G. W. Taylor, '30, has been awarded an appointment by the Board of National Fellowships in the Biological Sciences.

Phi Beta Kappa, first Greek Letter fraternity, was organized at the College of William and Mary, Williamsburg, Va., December 5, 1776. It is the great honor society of foremost institutions of learning in America.

The first rule of the Society is: "That in every design or attempt, whether great or small, we ought to invoke the Deity."

HAVE YOU READ . . .

Delta

"College Botany", W. H. Eyster, '25, Song and Smith, 695 p., \$3.50.

The first half of the book is devoted to a really successful synthesis of Anatomy and physiology, the second half to systematics and phylogeny. *Science News Letter*, July 9, 1932.

Zeta

"On the Origin of Common Types, and Economic Significance of Teratological Monster in Embryos of the Domestic Fowl", F. B. Hutt, '25. *Gamma Alpha Record*, May, 1932.

"Size of Explant and Volume of Medium in Tissue Cultures", in August 20, 1932, *Collecting Net*. It is an interesting abstract of a recent work by Dr. Ralph M. Buchsbaum, '29, instructor in Biology, University of Chicago. This article is based on a seminar report presented at the Marine Biological Laboratory on August 9.

Iota

"Topographic Similarities Between Materials Revealed by Ultra-violet Light Photomicrography of Living Cells and by Micro-incineration", by Gordon H. Scott, '28. *Science*, Vol. 76, No. 1963, August 12, 1932.

Kappa

"Cyclotrichum Meunieri Sp. Nov. (protozoa, ciliata); Cause of Red Water in the Gulf of Maine", Philip B. A. Power, '28, Zoological Laboratory, University of Pennsylvania. *Biological Bulletin*, August, 1932.

"Stimulative Effects of Illuminating Gas on Trees", by Carl G. Deuber, '21, Osborn Botanical Laboratory, Yale University. *Science*, Vol. 75, No. 1949, May 6, 1932.

Mu

"The Fibrillar System of Euplotes", by John P. Turner, '25. *The Collecting Net*, June 8, 1931. 202-203.

"What is a Publication", by Tracy L. Storer, '22. *Science*, Vol. 75, No. 1949, May 6, 1932.

Psi

"Migration of the Proximal Retinal Pigment in the Crayfish in Relation to Oxygen Deficiency", by Rudolf Bennitt and Amanda Dickson Merriek, Zoological Laboratory, University of Missouri. *The Biological Bulletin*, April, 1932.

Omega

"The Bacteriophage, Its Nature, Behavior and Use", by Will E. Booth, '31. This paper received second place in the 1931 undergraduate competition. *Bios*, March, 1932.

Alpha Epsilon

"Production of Dominant Lethal Genetic Effects by x-Radiation of Sperm in *Habrobracon*", by M. T. Stancati, '30. *Science*, Vol. 76, No. 1965, August 26, 1932.

"The Machines We Are", R. T. Hance, '29, Crowell, 381 p. \$3. The principles he discusses, hold throughout the realm of living things, but naturally the discussion focuses.

WANTED!

The National Secretary's office is very desirous of obtaining copies of certain back numbers of the *Biologist* which are needed to complete sets to be bound. Look through your chapter files and see if you have any numbers listed below. If anyone in your chapter has any of the following list, please send them in (postage will be refunded)—your co-operation will be greatly appreciated.

The list of numbers needed follows:

Vol.	No.	Vol.	No.
May, 1916.....I	1	April, 1925.....VII	1
Feb., 1921.....III	1	May, 1926.....VIII	1
Dec., 1921.....III	3	April, 1928.....X	1
May, 1923.....V	1	April, 1929.....X	3
Dec., 1923.....V	2	Sept., 1929.....XI	1
May, 1924.....VI	1	Feb., 1930.....XI	3

CHAPTER NEWS LETTERS

Beta

Beta Chapter has met seven times during the second semester of the academic year 1931-32. The topics of discussion have been quite varied:

Dr. J. R. Greeley on "Spawning Habits of Trout";

Dr. L. R. Dice, Curator of Mammals, Museum of Zoology on "Genetics and Variation of Deer-Mice in the genus *Peromyscus*";

A. H. Smith on "The Agarics Collected in the Vicinity of Rock River, Michigan";

Dr. Ned Dearborn, of the School of Forestry and Conservation, on "The Rabbit in the Hat", dealing with the manufacture of felt hats from rabbit hair;

Donald Ameel on "Lung Flukes of Mammals";

K. C. Kuster on "Respiration in Certain Aquatic Fly Larvae";

E. R. Martell on "Some Observations on a Spruce Plantation".

At the annual banquet May 25th, sixteen new members were initiated: Doris A. Bach, Reeve M. Bailey, Charles F. Bassett, Ralph Bennett, Elmer P. Cheatum, Pennoyer F. English, Margaret M. French, Miriam G. Groner, Frank C. Hasel, Vernon Hicks, Frank J. Hinds, George H. Kelker, Lasetta Pickard, Albert V. Pulling, Joseph S. Tidd, Bill H. Willford.

Chapter officers for the coming year were inaugurated after the initiation: President, Ralph Imlay; Vice-President, Jean Davidson; Recording Secretary, Elizabeth Shull; Treasurer, Josiah Lowe.

Dr. E. W. Sink, a former national president of Phi Sigma, presided as toastmaster, and Dr. Alexander G. Ruthven, Honorary National President of Phi Sigma and President of the University of Michigan, gave the address of the evening on "Some Thoughts on University Administration". In his opening remark, he indicated to us that the life of a university president is not an easy one, saying that he was "a shining example of what not to be and do", and that he was looking forward to the time when he could retire in a small house beside a nice boiler factory.

A brief summary of the address follows:

At present, the development of education has been going in a little recognized direction. It has been said that education is a character builder. However, in the training in skill and technique, the emphasis on character building has been lost. Education is now embarking on a new era. No one knows where it will end. The present trend is toward the ideal of training the student to realize in his thinking that there is more than one method of approach to a problem, and of training him not only in the method of living but also in the art of living.

Dr. Ruthven believes the first step in the attainment of this ideal lies in the development of a system of administration that will readily permit the working out of these aims. The administration of a large university is very complex with its varied fields of activity. Although the large university of today has developed from the small university it still uses the same methods that were used in the beginning: e.g., the president had to directly decide everything. With the present volume of activity such a system is impossible.

The organization of a large university must be *comparable* to that of a big business. In such a scheme there are two types of administrative functions: executive and advisory. These are met in all the various activities.

The plan that President Ruthven is trying to work out at Michigan is the grouping of activities and the arrangement of staffs so that individuals can easily go to the proper person for a final decision on his particular problem.

Departmentalization makes the development of such a system difficult. The solution of the problem lies in breaking down the departments and grouping them into divisions with administrators to adjust problems of overlapping, etc., Dr. Ruthven has already developed a division of fine arts, and now wishes a division of medicine and biology, a task which he foresees to be a difficult one.

Another change recently instituted at Michigan is from the large and unwieldy Senate to the small University Council.

Thus, by making the administrative system of the university more fit to cope with the complex problems involved, he hopes to successfully meet the necessity of training students both in the business and in the art of living, without sacrificing emphasis on technique.

Delta

Delta Chapter has just completed a very successful year. New officers elected for next year are: President, Charles Fobes; Vice-President, Munroe Romansky; Treasurer, Edwin Giddings; Secretary, Emily Thompson.

This spring we welcomed six new members into our chapter, and in April the Annual Initiation Banquet was held. Besides the speaker of the evening, each initiate composed an original biological poem. These were all very interesting as well as amusing, and added much to the entertainment of the evening.

Two illustrated lectures constituted the high lights of this spring's program. One was given by Mr. A. H. Norton, Curator of the Portland Natural History Society, his subject being "Birds of our Maine Coast". The other on "Fruit Flies" was presented by Dr. C. R. Phipps, from our own Experiment Station.

Two other very interesting meetings were had with a program consisting of student speakers. Each speaker chose his own subject and afterwards an informal discussion was held.

The Phi Sigma scholarship, won by the Sophomore with the highest rank in Biology and showing the greatest interest, was awarded at Honor Chapel to Abraham Rosen.

Next Fall we are all eagerly looking forward to another eventful and promising year, with another trip to Mt. Kataden and possibly numerous field trips.

Zeta

In the course of last year Zeta Chapter, University of Wisconsin, held six open meetings, five closed meetings, and two banquets, initiated forty-four men for active membership and one man for honorary membership. These men represented eleven University Departments.

So much for statistics—they do not bear evidence of the quality of our activities which ought to be indicated by the following summary of the lecture topics and speakers at our open meetings.

"Some Remarkable Trees of the World", H. D. Tiemann, Lecturer in Forest Products.

"Scandinavian Men in Science", J. E. Olson, Professor Emeritus of Scandinavian Languages.

"A Trip Through South America", G. C. Humphrey, Professor of Animal Husbandry.

"Preparation of a Manuscript for the Printer", L. E. Noland, Associate Professor of Zoology.

"A Fungus Disease", A. L. Smith; "A Virus Disease", K. L. Koch; and "A Bacterial Disease", L. A. Shaw, résumés of the research problems of three active members.

"Teton National Park, Wyoming", F. H. Smith, Assistant in Botany.

"Plant Evolution as Illustrated by Records of the Rocks", A. C. Seward, Professor of Botany, University of Cambridge, England. This was given at a joint meeting of Phi Sigma and Sigma Delta Epsilon, Women's Graduate Scientific Honorary Sorority.

Films showing "The Development of a Rabbit's Egg" and "The Growing of Normal and Abnormal Cells", followed by demonstrations of anatomical dissections presented by H. W. Mossman, Assistant Professor of Anatomy.

The members evinced a great deal of interest in these lectures of such diverse subject matter as shown by the consistently large attendance.

Dr. Edward Kremers, Director of the Course in Pharmacy and of the Pharmaceutical Experiment Station, and Professor of Pharmaceutical Chemistry, was elected to honorary membership and was initiated at the spring banquet. E. D. Holden, Assistant Professor of Agronomy, was toastmaster of the banquet. R. W. Clark, president of Zeta chapter, initiated the new members and C. E. Lane, Assistant in Zoology, gave the Initiate's Response. E. A. Birge, President Emeritus of the University of Wisconsin, introduced the Honorary Member who spoke on the "Genus *Monarda*". This same banquet serves for the installation of officers, which was conducted by E. M. Gilbert, Professor of Botany and Plant Pathology. The response for the officers was given by newly elected President H. E. Sagen, Instructor in Agricultural Bacteriology. Other officers for the ensuing year are: Vice-President, K. L. Mahoney; Recording Secretary, J. A. Keenan; Corresponding Secretary, H. B. Wolfe; Treasurer, M. C. Parker; Editor, A. B. Chapman.

At least twenty past and present members of Zeta chapter attended the International Genetics Congress at Ithaca, N. Y., this summer and a goodly number of these gave papers on their respective research problems. The Eugenics Congress and Poultry Science Association Meetings were likewise attended by a number of Zeta Chapter members.

Mu

The year 1931-32 has been a successful one for the Mu chapter of Phi Sigma, even though our campus newspaper, the Daily Californian, ran a series of articles aimed against the honor fraternities in general. We had a very efficient body of officers with Mr. James Leitch (Zoology) as president. He made very wise choices of speakers for our meetings, and he also has a pleasing and original manner of speech which is very desirable, yet not found in every chairman. The remaining officers were Emil M. Mrak, vice-president; Virginia E. Long, secretary, both of Botany, and Florence M. Frost, treasurer, from Entomology.

The two main events were the fall and spring initiations, at which we initiated a total of eight faculty and thirty-eight active members.

Our chapter holds meetings every three weeks during the term. Usually there are, in each semester, two dinner meetings, one initiation banquet, and two business meetings followed by light refreshments. At each meeting we have a speaker, usually a faculty member, or sometimes an active member who is willing to tell us about his research. Just before Christmas we tried a new type of meeting—an informal gathering around an open fire. The members from the Botany Department were in charge of this meeting. Each member present was called upon to tell about himself and his problem. The purpose of this type of meeting was to “break the ice” of the more formal meetings and to get better acquainted with each other. This afforded a very good opportunity for exchange of ideas concerning research problems, and that is perhaps, the chief purpose and benefit to be derived from our society.

At our last meeting new officers were installed for the coming year. They are as follows: President, Gordon True (Entomology); Vice-President, Theodore Broyer (Plant Nutrition); Secretary, Leonora Hohl (Botany); Treasurer, Grace Kern (Household Science).

The March and June Biologists met with unusual interest by members of Mu Chapter. The response received from the chapters in the

March issue shows a fine spirit throughout the whole society. I like the variation shown in articles and news items in the two issues.

At the spring Initiation Banquet on March 3, there were four Faculty and twenty-four active members initiated.

Instead of a regular dinner meeting one month, Mu Chapter tried an informal evening meeting around a fireplace at which one of the members gave a short talk with lantern slides. This was followed by discussion in which every one participated. The meeting was declared to be very successful and saved lots of expense.

Two members of the Botany Department received their Ph.D. degrees this semester:

J. W. McKay—"Cytological and Tenetical Studies in the Cucurbitaceae."

Mrs. Hazel McKay—"The Life History of Pterygophora Californica Ruprecht."

New Officers:

President—Gordon True, Entomology.

Vice President—Theodore Broyer, Plant Nutrition.

Secretary—Leonara Hohl, Botany.

Treasurer—Grace Kern, Household Science.

Nu

The Nu Chapter of Phi Sigma, Washington and Jefferson College enjoyed a prosperous year during the school year of 1931-1932.

In the fall of 1931, eight new members were initiated into this Chapter of Phi Sigma. At the successive meetings, each one of the new members presented an interesting paper which was enjoyed by all of the other members.

Wednesday, May 11, Dr. H. C. Raven, associate curator of the American Museum of Natural History in New York and a member of the Columbia University Faculty, lectured on "In Quest of Gorillas" to a large audience in the College Chapel. Dr. Raven was brought here under the William and Mary Davis Memorial Lectureship and under the auspices of the Phi Sigma. It was also through the efforts of Prof. Clarence D. Dieter that Dr. Raven was procured.

Preceding Dr. Raven's lecture, the Phi Sigma had its annual banquet at the George Washington Hotel. Dr. Raven was the guest of honor. Dr. Ralph C. Hutchison, the president of Wash.-Jeff. College,

Dean Weyer, dean of Wash.-Jeff. College, and Profs. Dieter and Porter, professors of biology were also guests. Dr. Linton, member of Phi Sigma and former professor at Wash.-Jeff. College, was present at the banquet. Dr. Linton is now doing research work at the University of Pennsylvania.

The next day, at one o'clock, the Phi Sigma planted a tree on the College Campus to commemorate George Washington's Bicentennial.

The officers of the Nu Chapter of Phi Sigma for the next year were elected on the following Friday. Richard H. Parks was elected president, and David S. Taksa was elected secretary-treasurer.

The Nu Chapter of Phi Sigma anticipates a greater year next year and looks forward to increased activities.

Xi

Xi Chapter held another initiation banquet, April 15, 1932, at its old "stamping grounds", the University club. Messrs E. Holmes, Clyde Licking, Theo Winship, and D. B. Charleton (faculty). Dr. D. D. Whitney of the Department of Zoology and Dr. J. E. Weaver of the Department of Botany welcomed the new initiates. Dr. Jenness of the Psychology department gave the main address of the evening.

Speaking of banquets, brings to mind two other banquets in which Phi Sigma was duly represented. The Chapter adds to its Honor Roll again:

Phi Beta Kappa: Helen Marr Cassaday, Xi, '31, Zoology; Violet M. Chan, Zoology; Gretchen Fee, Xi, '30, Botany; Elly M. Jacobsen, Xi, '30, Zoology.

Sigma Xi: Undergraduates to Associate Membership: Helen Marr Cassaday, Zoology; Elly M. Jacobsen, Zoology. Graduates to Associate Membership: Harold H. Biswell, Botany; Violet M. Chan, Zoology; James M. Dille, Physiology; E. T. Erickson, Zoology; Jo Carolyn Ferris, Zoology; Lillian M. Langevin, Pharmacy; Hollis T. Ross, Zoology; Floyd R. Schroeder, Zoology; Omer E. Sperry, Botany. Associate Members Promoted to Active Membership: W. E. McQuilken, Botany.

Upsilon

Concerning the concluding activities of our chapter, I shall begin with the election and inauguration of the new officers. This was held April 5th. At this time, the election resulted as follows:

President—Normal Mattox

Vice-President—Isabelle Summer

Secretary—Jean Rfau

Treasurer—Harry Corbisseno

This meeting was followed by one April 26th. At this time a most interesting talk on "Seasonal Growth of Certain Ohio Fishes" was given by Mr. W. W. Grimm, professor of Zoology here at the university.

The last regular meeting of the year was held May 3. Bacteropleage was the topic of a talk by Mr. A. K. Presnell, senior at the university.

Today, May 22, is the date of the annual field trip. Twenty-three, more or less, of the members motored to Clifty Falls to spend the day. Clifty Falls is on the Ohio River about eighty-five miles from Oxford. I haven't heard the outcome of the trip yet, but I know it was very successful, and everyone had a good time!

Chi

Chi chapter has finished a very successful year. We have a fine start on our new project which is a cabin for Biological field work. Bozeman is fortunate in being located in the beautiful Gallatin valley. We are surrounded by magnificent mountain ranges which harbor some of the loveliest spots in Montana. This territory is known as a "Geologist's Paradise", and presents equally fine opportunities for Biological studies. Many alpine meadows, and various lakes at different elevations make possible studies of the distribution and the effect of variations in altitude on the flora and fauna of the region.

Our annual picnic was held during May. The main purpose of the picnic was to look over sights for our prospective cabin. Other activities of the day consisted of baseball and "leap-frog".

Montana State College is host each year to High School students at a Vocational Congress. Part of the program is a campus tour for which each department is responsible for an exhibit. Phi Sigma acted as sponsors in connection with the exhibit for the Biology departments. One large laboratory was given over to exhibits in Entomology, Zoology, Bacteriology, Botany, and in some special thesis work. Each exhibit and demonstration was arranged by a student member of Phi Sigma. This was one of the greatest centers of interest on the campus.

Another of the year's activities was a health show given for the student body during May. This show consisted of films showing the

necessity of periodic health examination, history of serology in fighting disease, and proper methods for reducing. Miss Sarah Barnes, student health director, gave a short talk with each film.

Our new officers have all been installed and we are looking forward to a very active time next year.

Omega

OMEGA'S SUMMER REPORT

Dr. P. B. Sears, head of the department of botany, is in residence here at the university this summer. He is offering an advanced course in plant ecology, directing research, and continuing his research on fossil pollens.

Dr. A. Richards, head of the zoology department, taught at the university during June and then went to the Rocky Mountain Biological Laboratory at Gothic for the summer session of the station. John Shed ('28) will teach one month during summer school in the zoology department. He took over the cytology and heredity classes when Dr. Richards went to the Rocky Mountain Biological Laboratory.

Dr. L. B. Hoisington, head of the department of psychology, is in residence here this summer. He is offering applied psychology, mental hygiene, and seminar, and is supervising research. He is also working on material for an elementary textbook of psychology.

Dr. C. E. Decker, professor of paleontology, is studying at the museum at Albany, N. Y. under a National Research Council grant, this summer.

Dr. Lloyd E. Harris, professor of pharmacy, is spending the summer in Norman. He is continuing work on the action of potassium salts on antipyrine and is managing the Pharmacy Drug Garden.

Dr. A. O. Weese, professor of zoology is spending the summer in Norman, recovering from a minor operation.

Dr. R. E. Jeffs, associate professor of botany, is spending the summer resting in Norman, recuperating from an illness incurred during the winter.

Dr. A. I. Ortenburger, associate professor of zoology, is teaching field zoology at the Indiana University Biological Station at Winona Lake, Indiana. With him is Leonard Strickland ('32) who is doing work toward his master's degree. Mr. Strickland will be in medical school,

University of Louisville, Louisville, Kentucky during the school year 1932-1933.

Dr. A. S. Foster, assistant professor of botany, and Mrs. Foster (Helen Vincent '28) are spending the summer at the Rocky Mountain Biological Laboratory at Gothic, where Dr. Foster is teaching field botany.

Miss Dixie Young, assistant professor of zoology, is spending the summer at her home in Mangum and will be on leave of absence during the school year 1932-1933 at Yale where she is finishing work on her Doctor's degree.

Dr. J. Willis Stovall, assistant professor of paleontology, is spending the summer collecting at Agate, Nebraska. L. I. Price ('31) is spending the summer with Dr. Stovall. Next year Price will be at the American Museum of Natural History at New York.

Dr. R. D. Bird, assistant professor of zoology, and Mrs. Bird (Lois Bould '28) have a son, Charles Durham, born July 7. Dr. Bird is in charge of the University of Oklahoma Biological Survey during the summer. Most of the collecting is being done in the Wichita National Forest and Game Preserve near Lawton, Comanche County. Special emphasis is being laid on ecological work. With him is Wilton M. Fisher ('32), O'Reilly Sandoz ('32), and several others.

Dr. H. L. Chance, assistant professor of botany, is teaching special agricultural botany and taxonomic botany in summer school here.

Mr. R. W. Harris, assistant professor of paleontology, is vacationing in parts unknown.

Mrs. R. B. Meyers, instructor in physics, is in residence at the university this summer. She has charge of the beginning physics laboratories.

Mr. Rufus H. Moore, instructor in botany, is heading a field botany tour through the north and west this summer. He will be at Chicago University next year working on his doctor's degree.

Members of Phi Sigma who received their master's degree in June are G. Olin Rulon ('31), and H. Noel Ferguson ('31) from the zoology department, and F. A. Barkley ('28), W. Edwin Booth ('31), and Z. Rotha Bull ('31) from the botany department. Booth is spending the summer in Colorado. Rulon expects to be in the University of Chicago during the year 1932-33. Barkley spent June and part of July collecting plants in southern Mississippi. He will remain at the university next year on the Ray M. Balyeat fellowship in allergy.

Mrs. Barkley (Elizabeth Ducker '30) is working on the Flora of Pottawatomie County, Oklahoma for her master's thesis. She is spending the summer in that county collecting material. J. A. Clark ('31) is an assistant in the botany department during the summer session. He remains at the university during the coming year as a graduate assistant in botany. Ramona Todd ('31) is attending the summer session at the university continuing work on the Ray M. Balyeat fellowship in allergy. She will remain at the university during the coming year as a graduate assistant in botany.

Glenn C. Couch ('29) began work July 1, as assistant in the botany department.

Mathille Bjerregaard ('32) is teaching bacteriology in the William Jennings Bryan Memorial College at Dayton, Tennessee, during the summer session. She will be at the university during the coming year as a graduate assistant in chemistry.

Ruth Holzapfel ('32) is continuing her research here at the university during the summer session. Sadie Mahon ('30) is teaching zoology 1, here this summer. Harold Hefley of the Baylor University Chapter is taking some summer work in the university and is working on his thesis.

Babette L. Shumacker ('31) will finish her work for the master's degree at the end of the summer. Her problem is the mitotic index in whitefish embryos. She will continue her studies at Bryn Mawr in 1931-1932 with a scholarship from that place.

William Bayliff ('28) and Mrs. Bayliff, 165 Green Street, Annapolis have a daughter Nancy Nell, born in May, 1932.

Kara J. Fullerton ('28) was married on June 4 to Mark D. Holcomb of Centerview, Missouri. The wedding took place at the home of the bride's parents in Lawton. They will live in Louisville, Kentucky, next year where Mr. Holcomb will attend the University of Louisville Medical School. During the summer he had the Dr. Howard Kelly scholarship and was with the Biological Survey in the Wichita Mountains.

Miss Marion Palm ('31), artist and technician in the zoology department, was married on June 9 to Mr. Lauren E. Rosenberg at her home in Galesburg, Illinois. They will make their home in California where Mr. Rosenberg is completing work for his doctor's degree.

Marcus M. Ravitch ('31), married Irene nee Ravitch, on March 25, 1932. He is a student in Medical School at Johns Hopkins University.

When Omega Chapter found it possible to secure Dr. Richard Goldschmidt of the Kaiser Wilhelm Institute of Dalhem, Germany, as speaker, October 26, it obtained special dispensation of the National Council to hold an early election of members. Therefore, on October 4 at a business meeting plans were made to entertain Dr. Goldschmidt. Eighteen new members also were elected.

Dr. R. Goldschmidt was elected as an honorary member. Dr. E. L. Little, assistant professor of biology at Southwestern State Teachers' College, Mr. Roy Jones, assistant professor of biology at Central State Teachers' College, Miss Christia Allender, Miss Katheryn Davis, Miss Ethel Derrick, Mr. David Foster, Mr. Stanley Hagen, Mr. Claude Johnston, Miss Margaret Kaeiser, Mr. Billy Longmire, Mr. James McInnis, Mr. George Mickey, Mr. Johnnie Self, Mr. Charles Smith, Miss Virginia Suddath, Miss Helen Talley, and Mr. James Ward were elected to active membership.

Dr. Goldschmidt arrived in Norman, October 25 and was entertained in the home of Dr. Aute and Dr. Mildred Richards. During the afternoon the zoology faculty of the University of Oklahoma honored Dr. Goldschmidt with a tea.

On October 26 at 4 P.M. he delivered a public address on "Intersexuality and Sex Determination" to an audience that crowded the auditorium.

At 6 P.M. Phi Sigma held its fall initiation in the Student Union Building. Dr. A. I. Ortenburger officiated, and Dr. Mildred Richards extended the welcome to new members. Mr. Harold Hefley, formerly of Tau Chapter at Duke University, was affiliated at that time. Following the initiation, a banquet was held in the Union Ball-room. One hundred forty members and guests were present. Dr. Goldschmidt was guest of honor, and Dean and Mrs. Homer L. Dodge were special guests. Among those present were guests from eight state colleges. Dr. Paul B. Sears acted as toastmaster. Speakers included Dr. A. O. Weese, Dr. R. Goldschmidt, Miss M. Bjerregaard, and Mr. B. Longmire.

Following the banquet, Dr. Goldschmidt, introduced by Dr. Aute Richards, delivered a lecture on "The Physiological Basis of Inheritance", to an audience of two hundred.

Alpha Alpha

The Initiation banquet, which was the last meeting of Alpha Alpha Chapter for the year, was held in the Gold Room of the Victor Hugo,

May 13th. There were about sixty members, guests, and initiates present.

The ceremony was conducted in an impressive manner by our president, Mr. Robert Rutherford. The officers and initiates wore caps and gowns for the occasion.

There were twenty initiates, including one faculty member, who was also speaker of the evening. This was Dr. H. J. Deuel, Jr., who is head of the Biochemistry Department of the University of Southern California. His subject, Sexual Variation in Carbohydrate Oxidation, covered some of the results of research work which has been carried out under the grants from the National Research Council and American Medical Association.

Most of the initiates were candidates for higher degrees and will be leaving the campus to fill positions in various fields. This leaves us with our old problem of carrying on with so few members resident on the campus. In fact, it has been largely due to the active interest and financial support of those alumni who have located in and near Los Angeles, that we have been able to get a fresh start each school year. I wonder if other chapters have this same problem, or do they elect more undergraduates?

We are delighted with the new shield on the cover of the Biologist, and with all the changes and improvements in the general make-up. The reports from chapters in the March number were especially interesting and the articles in the June issue offer timely suggestions for summer study. It is a magazine of which we can all be proud.

The new corresponding secretary is Mrs. Nina L. Loomis, 1324 North Ogden Drive, Hollywood, Calif.

Our new president is, Mrs. Tema Clare, Botany Department, University of Southern California.

Alpha Epsilon

Alpha Epsilon was very glad to initiate, as faculty member, Dr. C. G. King, Professor of Chemistry in the University of Pittsburgh. Dr. King's best known and perhaps his most outstanding work during the year has been on the isolation of vitamin C from lemon juice. Preliminary announcement of this work has been made in Jour. Biol. Chem. 94: 483, 1931 and Sci. 75: 1944, 1932. A more detailed account will be published in the near future. Dr. King has also done research on euzyines,

protein metabolism of bacteria, synthetic glycerides, and problems of general animal nutrition.

Nine active members were initiated, all of whom are graduate students in the university. Their names and research fields follow:

Bruce, H. A. Zoology. Chromosome size in seven varieties of garden peas

Crummy, P. L. Zoology. Effects of X-radiation on the integument of the *Unodele*, *Iriturus*

Cutuly, Eugene. Zoology. Formative cells in regeneration tissues of the *Urodele*, *Iriturus*

Darrah, Wm. E. Botany. Flora (fossil) of the Mason shales

Hilsman, Helen. Zoology. Reproductive cycles in the *Unodele*, *Iriturus viridescens*

Rusbridge, Harold D. Anatomy. Pinelectomy in rats

Schubert, W. A. Zoology. The relation of permeability to age in *Paramoecium*

Stiefel, J. R. Zoology. Effect of X-radiation upon limb regeneration in *Urodeles* of the genus *Iriturus*

Thomas, J. G. Bacteriology. Bactericidal action of yeasts

The last meeting of the year 1931-32 was an especially interesting one. Each member was invited to exhibit results of his work during the year. The response from both faculty and active members was gratifying. There were twenty exhibits covering a wide range of subjects and including microscope slides, lantern slides, drawings, charts, apparatus, and living and preserved specimens both zoological and botanical. The owner of each exhibit explained it briefly in an informal meeting following our usual dinner together. We would recommend such a final gathering to other chapters. It provides opportunity for everyone to display his favorite work, which is always personally gratifying; it gives everyone a chance to see what his fellows are doing; and it stimulates the entire group because it gives evidence of definite progress made.

The annual scholarship for the summer was awarded to William Van Dersal who is making a systematic study of marsh flora in one section of Pymatuning Swamp near Linesville, Pennsylvania. The swamp has long been a favorite site for ecological studies, and it is now being drained. Consequently the Phi Sigma scholarship provides a last opportunity for work in this region.

Alpha Zeta

Alpha Zeta chapter of Phi Sigma was represented at the Virginia Academy of Science meeting held at Hollins College, near Roanoke, April 22 and 23, by the three faculty members—Miss Blank, Dr. Davis and Dr. Taylor, and by two students sent by the club—Miss Shreve and Mr. Emerson.

At the regular meeting of the society on May 11, Mr. Michael DeCarlo and Miss Marie Fries were initiated to active membership. Miss Shreve then gave a resumé of a few talks which interested her most at the Va. Academy meeting, Miss Wyndham and Mr. Stone told the club of the methods and results of their work on "Chlorophyllless Lethals in Garden Balsams", and Miss Reilly read a paper on "Trypanosomes and Sleeping Sickness". Discussion of subjects suggested by these talks provided active participation in the meeting for all members.

The final meeting of the year was held May 25, at which Miss Martin and Mr. Conlen spoke on "The Technique of Making Slides in Embryology", a talk based on their own experience in the work.

The chapter plans to have more talks by the members about their work in problems in biology next year, and also to become familiar with the foremost biological books, by means of reading and discussion. We have planned, moreover, to save money enough to pay half the expenses of students wishing to attend the Virginia Academy of Science meeting next year.

Alpha Eta

The Alpha Eta Chapter of Phi Sigma at the Oklahoma A. & M. College, Stillwater, Oklahoma, closed a very successful school year by initiating thirteen more prospective members into the society at a banquet held on May 12, 1932, which brings the membership to one hundred and eleven members considering our activity for two and one half years.

Following the banquet and rituals a special meeting for the election of officers was held setting forth a new set to begin an interesting summer series of meetings and regular fall and winter meetings. The following officers were elected:—Mr. Harold Schnorrenberg, President; Mr. Ira Goodfellow, Vice President; Miss F. Sadye Kornfeld, Secretary; and Mr. Oren Eastep, Treasurer.

Throughout the year our meetings have been conducive to full attendance by illustrated talks and papers given by Phi Sigma faculty members, Phi Sigma graduate and undergraduate members.

The Alpha Eta Chapter saw the need of continuing its activities, stimulating biological research interest for its members and particularly the new summer initiates by maintaining summer meeting during the months of June and July.

Many teachers and graduate students matriculating at the college this summer took advantage of the opportunity to further their biological research by becoming Phi Sigma members.

Alpha Eta Chapter is starting off again on the beginning swing of a full and interesting year with plans for bi-monthly meeting.

Alpha Theta

Alpha Theta Chapter has been having growing pains. On February 4 twelve new members were initiated and presented with membership certificates. A banquet was held in their honor at which they were asked to present papers on pseudo-scientific subjects. These were highly entertaining and all present had an enjoyable time.

At the meeting of March 4, Mr. Ernest McCall presented an interesting report on a portion of his work on "Forage Grasses and their Digestability". Mr. J. S. Bixby gave a report on "Recent Studies in the Use of Ultra Violet Light for Treating Animal Disorders".

At the Spring election of new members, candidates were considered from the Veterinary College, the Farms Crops, Animal Husbandry, Dairy, Poultry, Horticulture, Home Economics, Chemistry Departments as well as from the basic Biological Science departments. Twenty-five members were initiated the afternoon of May 21 followed by a banquet at the Washington Hotel where the members were entertained by the initiates presenting many excellent pseudo-scientific papers. These have been placed on file by the secretary for future reference.

Alpha Iota

Dr. Norman H. Stewart, with a seining party, took the pearly dace, *Margariscus margarita* Cope, from Elk Creek, Center Co., Penna., the type locality July 9. They were the first specimens recorded in Pennsylvania since Cope took his types about eighty years ago.

Dr. William H. Eyster entertained the chapter at the summer initiation of new members in his cabin overlooking the Susquehanna river above Winfield.

Charles E. Mohr, '30, and John L. Mohr, '33, traveled through the cave regions of western Virginia, Tennessee, Kentucky, and Indiana collecting cavernicoles. They took the young of the lump-nosed bat, *Corynorhinus*, and of the gray bat, *Myotis grisescens*, as well as a number of cave inhabiting beetles.

Publications

Wm. H. Eyster

College Botany

Charles E. Mohr

The Seasonal Distribution of Bats in Pennsylvania

Proc. Penna. Acad. Sci., Vol. VI

Myotis grisescens and *Myotis sodalis* in Tennessee and Alabama

Jour. Mamm. Vol. 13, No. 3

Charles E. Mohr

Myotis subulatus leibii and *Myotis sodalis* in Pennsylvania

Jour. Mamm. Vol. 13, No. 2

Cave Fauna

Pennsylvania Caves

Bulletin G.-2

Penna. Geol. and Top. Survey

Alpha Kappa

At present I can only give you one of the two things which you request in the conclusion of your letter and that is, my criticism of the March issue of the "Biologist". I have read it "from cover to cover" and find that it is a very complete report of what is happening in Phi Sigma all over the United States. We New Yorkers are very much interested in what is going on in different parts of the country along the lines of research. I also think the very fine work going on in some of the chapters should be a stimulus to some of the chapters not represented or those reporting very little. As I glanced through it the thought occurred to me which was expressed in Dr. Lang's letter but after reading your reply I realized the nature of the situation. It made one feel good to be a Phi Sigma member to see all the people represented with contributions at the AAA S. Convention. I sincerely hope that Phi Sigma will be represented at the next one.

At our March meeting the nominating committee proposed the names of active, faculty and honorary members. The topic for the evening's program was offered by Miss Mildred McAusland. She spoke on "Bud Formation and Protonemal Development in Musci". The interesting points covered were those of length of time of germinating buds, specific differences in development of spores, effect of temperature on development and differences of resistance to infection. The subject was the topic for Miss McAusland's master's thesis. The contributions were very interesting and the members enjoyed a profitable evening.

Our April meeting was bacteriological in nature. Miss Leah Kaplan who is doing research work at the Mt. Sinai Hospital in New York gave a most lucid talk on "The Development of Bacteriological Staining" with particular reference to the physical and chemical theories of staining now extant. The development of coal tar dyes is an important step in the progress of staining.

On May 31st we held our initiation at the College. Seven graduating seniors, two faculty members and one honorary member were installed. We are very proud to have Dr. William H. Park, Director of the laboratories of the Department of Health of New York City as our honorary member. The ceremonies for the evening opened with the inauguration of new officers. They are: Ruth Silverman, President; Ruth Pinsky, Vice President; Marie Kravietz, Corresponding Secretary; Dorothy Mossner, Recording Secretary; and Sarah Cohen, Treasurer. After the candidates were duly installed, we closed the formalities of the evening with a tea where initiates and old members exchanged confidences. As this was our last meeting for the season plans were made for the fall. Committees volunteered to report on current activities in the various scientific fields, such as genetics, botany, physiology, etc. We are looking forward to a very interesting meeting in the fall when we hope to hear the reports that our members make on the research going on in the various fields.

On Sunday, June 5th the chapter spent a most delightful day in the woods of Staten Island. Dr. Clum of the Botany Department, and Miss Nelson, a newly elected faculty member of the Zoology Department led the field trip. We identified about fifty plants and heard the calls of the cuckoo, the oven bird and many others. The group numbered about twenty-five and all present felt that a most profitable and enjoyable day had been spent in the open.

Our summer plans are as yet incomplete. Some of our members plan to attend Cornell, some Woods Hole and some the Biological Station

at Ann Arbor, Michigan. However, in the fall I shall be able to tell you more of our accomplishments during the summer, which I think will be much more definite than our expectations at present.

I realize that March is quite a distance back for news, but as we had no opportunity to report our March and April meetings I hope it would not be out of order to report the news now.

This past summer found many of us very busily engaged along various lines of research. Misses Silverman, Atkin, Feffer, Mossner, Feld and Rositzke spent the summer at Cornell University at Ithaca. The first four named were enrolled in courses in Ornithology and Trees and Shrubs. The latter two followed courses in Vertebrate Zoology, which by the way is the beginning of their work toward the Masters Degree.

Mrs. Herskowitz spent a very pleasant summer at the University of Michigan Biological Station taking courses in Advanced Ornithology, Mammology and Herpetology. We had another representative in the same institution—one of our faculty members—Miss Nelson, who is on the teaching staff at the summer school.

We also had representatives at Woods Hole, Mass. The Misses Wilhelm and Primrose studied there, and Mr. Roberts Rugh, a faculty member carried on research work. We also had members working right here in New York City—The Misses Spieler and Kaufman studied at Columbia University and were awarded their Masters Degrees. Dr. Clum, a faculty member, and Beta '24, taught at the college and attended the Syracuse Botanical Society convention. Dr. Simpson carried on her research work at the college and attended the Genetics Congress at Ithaca, along with the other "Cornellians". Miss McAusland studied Anthropology at Columbia. Mrs. Dickstein taught biology in the summer Junior High School. Misses Glazer and Lieberman extended their biological information along nature study lines and taught at summer camps. Miss Kaplan continued her research work at Mt. Sinai Hospital on the different types of pneumococcus.

The rest of our members report very pleasant summers, travel and rest predominating. Since I myself am not represented in the above group of "actively biologically engaged individuals" I feel that I can say that it shows a pretty keen interest in the biological sciences and an effort to keep up with current work. Don't you?

At our first meeting this fall we had a very interesting report of the Genetics Conference at Ithaca, by one of our speakers, Lillian Atkin. She emphasized the human genetics. In addition, Ruth Silverman, our

president, gave a concise but complete summary of all the important findings in animal genetics during the summer. Plant genetics was also included when Dr. Simpson, our faculty member spoke of work done concerning segmental interchange of chromosomes in *Datura*. It was a most profitable evening for all of us.

On Sunday, November 6th we took our second field trip to see what the November woods looked like. We found, much to our surprise, blooming Shepherd's Purse, at this late date. We were also fortunate to find the liverworts, *Riccia* and *Anthoceros*, the latter bearing fruiting sporophytes. We bedecked ourselves with a thick layer of beggars' ticks marching through the meadow to get at the liverworts, but it was well worth it.

We have definitely decided to continue our policy of having at least two field trips a year. Dr. Clum was our spirited leader, and all who braved the November weather spent a most pleasant and profitable day out in the woods.

Next week, in keeping with our idea of committee reports, by the members, we are going to hear our faculty member, Dr. Clum speak on new findings in plant physiology. He will be followed by two of our members, the Misses Lowen and Wilhelm who will discuss plant ecology, morphology and taxonomy. Miss Glazer will report on the latest findings in phytopathology. To conclude the evening's program Miss Schoenfeld will present items of importance in the current field of Invertebrate Zoology. We are looking forward to a season of interesting meetings.

Alpha Lambda

The Alpha Lambda chapter has enjoyed a particularly inspiring year. Meetings have been held, as in the past, every two weeks at various homes of members. At these meetings, a talk is given by some authority in his particular field. Beginning April 21, Dr. Sugden gave a talk on the "Cicadas of Utah". On May 5, 1932, Dr. Gregory, who is now head of the Bishop Museum in Hawaii, and director of the Pacific Institute of International Relations, gave an interesting talk concerning research problems connected with the twenty-thousand islands of the Pacific ocean. His extensive knowledge of the Polynesians made the occasion particularly enjoyable. On May 19, Mr. Newell Cook, State Game Commissioner, talked upon Wild Fowl Conservation and Big Game in Utah. This was also intensely interesting.

The big affair of the season was the trip to the Smith & Morehouse Canyon over May 27, 28, and 29th, as the guests of Dr. R. V. Chamberlin, head of the department. This canyon is approximately 65 miles from Salt Lake and the spacious cabin is located among beautiful pines, high mountains, and close to two streams. Forty members of their guests were present, including, Dr. M. S. Johnson and his wife, Miss Margaret Schell, Miss Lucile A. Rice, Dr. A. M. Woodbury, W. W. Newby, and Dr. R. V. Chamberlin. Our president, Ira M. Telford, came from Idaho Falls to enjoy the trip.

Thanks should be expressed to Dorothy Naylor, Aileen Berlin and Lowell Woodbury for their work in arranging such a highly enjoyable party.

The following members secured their Master's Degrees this spring: Dorothy Naylor, Edward L. Lowrance, Wilton Ivy, Kathryn Thomas.

Other members securing their B.A. degrees are: Aileen Berlin, Olive Thomas, Conrad Larsen, Wm. H. Behle, Florence Jones, Frances Raley.

Miss Olive Pratt Thomas, 21, prominent University of Utah graduate, died suddenly Wednesday, August 24th at the family residence, 1548 Michigan avenue, as a result of food poisoning.

Miss Thomas was born in Provo January 2, 1911, a daughter of Daniel H. and Ethel Pratt Thomas. Mr. Thomas is a Salt Lake attorney. Miss Thomas attended school here and was graduated with honors at the university last spring. She was a member of the Delta Delta Delta sorority and took an active part in schools affairs, being initiated into Phi Sigma, February 13, 1932.

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